

Form PTO-447A  
(Rev. 7-98)

Staple to face of Application

U.S. DEPARTMENT OF COMMERCE  
PATENT & TRADEMARK OFFICE**APPLICATION TRANSFER REQUEST FOR S.N. 09763753****Section I. TRANSFER REQUEST BY**

Name RIMELL, SAMUEL G Date 6/29/2004

TO: Art Unit 2123 Class/sub /

FROM: A.U. <sup>2123</sup>~~2423~~ Class 703**REASON:**

Not accepted. Invention not directed to database structure, but computer software analysis using graph. Try 717/144 or 717/156

Gatekeeper concurrence \_\_\_\_\_

**Section IIa. DISPOSITION BY RECEIVING TC**

By: \_\_\_\_\_ A.U. Date \_\_\_\_\_

NOT ACCEPTED ☐ Forward to receiving TC Post Classifier**REASON:****Section IIb. DISPOSITION BY RECEIVING TC POST CLASSIFIER**☐ This dispute was resolved.

Forward to TC/AU Class/Sub / Post Classifier \_\_\_\_\_ Date \_\_\_\_\_

Concurring \_\_\_\_\_

☐ This dispute was not resolved, forward to DISPUTE RESOLUTION PANEL**Post Classifier Assessment:**

Gatekeeper concurrence \_\_\_\_\_

Post Classifier \_\_\_\_\_ Date \_\_\_\_\_

**Section III. DISPOSITION BY DISPUTE RESOLUTION PANEL**

Date \_\_\_\_\_

**Panel Decision:**

Forward To Technology Center/Art Unit Class/sub /

**REASON:**

Panel Member \_\_\_\_\_

Concurring Panel Member \_\_\_\_\_

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*           and New Year's Day.           *
*                                           *
* * * * * * * * * * * * * * * * * * * * *
FILE 'USPAT' ENTERED AT 09:41:23 ON 08 MAY 1998

* * * * * * * * * * * * * * * * * * * * *
*           W E L C O M E   T O   T H E   *
*           U . S .   P A T E N T   T E X T   F I L E   *
* * * * * * * * * * * * * * * * * * * * *

```

=> s zikria, bashir/in

L1 1 ZIKRIA, BASHIR/IN

=> d

1. 5,565,187, Oct. 15, 1996, Methods for studying capillary circulation using fish fry and tadpoles; Bashir Zikria, et al., 424/9.6, 9.1, 9.2 [IMAGE AVAILABLE]

=> e zikria

| E#  | FILE  | FREQUENCY | TERM         |
|-----|-------|-----------|--------------|
| --  | ----  | -----     | ----         |
| E1  | USPAT | 2         | ZIKMUND/BI   |
| E2  | USPAT | 4         | ZIKOLOVA/BI  |
| E3  | USPAT | 3 -->     | ZIKRIA/BI    |
| E4  | USPAT | 30        | ZIL/BI       |
| E5  | USPAT | 2         | ZILA/BI      |
| E6  | USPAT | 8         | ZILACTIN/BI  |
| E7  | USPAT | 1         | ZILAG/BI     |
| E8  | USPAT | 4         | ZILAHY/BI    |
| E9  | USPAT | 1         | ZILANE/BI    |
| E10 | USPAT | 3         | ZILASCORB/BI |
| E11 | USPAT | 1         | ZILAT/BI     |
| E12 | USPAT | 10        | ZILBER/BI    |

=> s E3

L2 3 ZIKRIA/BI

=> d L2 1-3

1. 5,704,358, Jan. 6, 1998, Method and apparatus for diagnosing capillary leak; Bashir A. Zikria, 600/368, 431 [IMAGE AVAILABLE]

2. 5,685,302, Nov. 11, 1997, Method for determining plasma volume, determination of blood volume thereby, and apparatus therefore; Bashir A. Zikria, et al., 600/370, 300, 371, 431, 436 [IMAGE AVAILABLE]

3. 5,565,187, Oct. 15, 1996, Methods for studying capillary circulation using fish fry and tadpoles; Bashir Zikria, et al., 424/9.6, 9.1, 9.2 [IMAGE AVAILABLE]

=> s antioxidant# and (capillary(W)endothelial(W)junction#)

45635 ANTIOXIDANT#  
40683 CAPILLARY

4803 ENDOTHELIAL  
153434 JUNCTION#

7 CAPILLARY (W) ENDOTHELIAL (W) JUNCTION#  
L3 1 ANTIOXIDANT# AND (CAPILLARY (W) ENDOTHELIAL (W) JUNCTION#)

=> d

1. 5,728,707, Mar. 17, 1998, Treatment and prevention of primary and metastatic neoplasms with salts of aminoimidazole carboxamide; Felix Wehrmann, 514/274; 424/85.4, 85.7; 514/2, 21, 386 [IMAGE AVAILABLE]

=> d Kwic

US PAT NO: 5,728,707 [IMAGE AVAILABLE]

L3: 1 of 1

SUMMARY:

BSUM(13)

Even . . . S. A., and Maddocks, J. L., 1984, Br. J. Clin. Pharmac. 17:417-422. In addition, AICA was found to exhibit an **antioxidant** activity and increase the superoxide dismutase expression in lymphocytes incubated in vitro. Muzes, G., et al., 1990, Acta Physiologica Hungarica. . .

DETDESC:

DETD(9)

Metastases, . . . with adherent lymphocytes and platelets are trapped in capillaries and the tumor cell membrane interacts with the capillary endothelium. The **capillary endothelial junctions** retract, and tumor cell ligands bind to receptors on the endothelial and basement membranes. Tumor cells then release collagenase IV, . . .

DETDESC:

DETD(11)

Since . . . and Terao, S., et al., 1985, Advances in Prostagl. Thromb. Leuk Res. 15:315-315. In addition, AICA was found to have **antioxidant** activity and to increase superoxide dismutase activity. Muzes, G. et al., 1990, Acta Physiologica Hungarica 76:183-190.

DETDESC:

DETD(12)

Therefore, administration of AICA or a salt thereof, which are imidazole compounds, can result in inhibition of thromboxane A.sub.2 and/or enhanced **antioxidant** defenses against oxidants and free radicals by superoxide dismutases. The net result is the inhibition of metastatic neoplasms in an. . .

=> s vitamin C or (ascorbic(w)acid)

13454 VITAMIN  
1242249 C

2500 VITAMIN C  
 (VITAMIN(W)C)  
 19216 ASCORBIC  
 426513 ACID  
 15988 ASCORBIC(W)ACID  
 L4 17088 VITAMIN C OR (ASCORBIC(W)ACID)

=> s hydroxyethylstarch and L4

106 HYDROXYETHYLSTARCH  
 L5 3 HYDROXYETHYLSTARCH AND L4

=> d 15 1-3

1. 5,470,843, Nov. 28, 1995, Carbohydrate-containing polymers, their preparation and use; Wilhelm Stahl, et al., 514/61, 25, 54, 55, 56, 60; 525/32.2; 536/4.1, 17.2, 18.5, 18.7, 20, 21, 45, 102, 124 [IMAGE AVAILABLE]

2. 5,374,624, Dec. 20, 1994, Fluorocarbon blood substitute; Leigh D. Segel, 514/21, 672, 673, 749, 756, 759, 761 [IMAGE AVAILABLE]

3. 4,148,689, Apr. 10, 1979, Immobilization of microorganisms in a hydrophilic complex gel; Tsunetoshi Hino, et al., 435/182, 176, 177, 180; 502/7 [IMAGE AVAILABLE]

=> d his

(FILE 'USPAT' ENTERED AT 09:41:23 ON 08 MAY 1998)  
 L1 1 S ZIKRIA, BASHIR/IN  
 E ZIKRIA  
 L2 3 S E3  
 L3 1 S ANTIOXIDANT# AND (CAPILLARY(W)ENDOTHELIAL(W)JUNCTION#)  
 L4 17088 S VITAMIN C OR (ASCORBIC(W)ACID)  
 L5 3 S HYDROXYETHYLSTARCH AND L4

=> superoxide(W)dismutase and L4

'SUPEROXIDE(W)DISMUTASE' IS NOT A RECOGNIZED COMMAND

=> s superoxide(W)dismutase and L4

2198 SUPEROXIDE  
 1159 DISMUTASE  
 1133 SUPEROXIDE(W)DISMUTASE  
 L6 218 SUPEROXIDE(W)DISMUTASE AND L4

=> s catalase and l6

3409 CATALASE  
 L7 121 CATALASE AND L6

=> s L7 and glutathione(W)peroxidase

3128 GLUTATHIONE  
 8512 PEROXIDASE  
 172 GLUTATHIONE(W)PEROXIDASE  
 L8 32 L7 AND GLUTATHIONE(W)PEROXIDASE

=> s hydroxyethyl(W) rutoside

58413 HYDROXYETHYL  
28 RUTOSIDE  
L9 15 HYDROXYETHYL(W) RUTOSIDE

=> s L8 and L9

L10 0 L8 AND L9

=> s L8 and cAMP

3414 CAMP  
L11 2 L8 AND CAMP

=> d L11 1-2

1. 5,725,804, Mar. 10, 1998, Non-crosslinked protein particles for therapeutic and diagnostic use; Richard C. K. Yen, 252/314, 311; 424/484, 491; 514/776, 937, 965 [IMAGE AVAILABLE]

2. 5,616,311, Apr. 1, 1997, Non-crosslinked protein particles for therapeutic and diagnostic use; Richard C. K. Yen, 424/1.33, 1.29, 1.37, 484, 499; 427/2.14, 2.21, 213.3, 213.33; 428/402.2, 402.24; 435/177; 935/54 [IMAGE AVAILABLE]

=> d L1 1-2 kwic

1 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE  
ENTER ANSWER NUMBER OR RANGE (1):end

=> d his

(FILE 'USPAT' ENTERED AT 09:41:23 ON 08 MAY 1998)  
L1 1 S ZIKRIA, BASHIR/IN  
E ZIKRIA  
L2 3 S E3  
L3 1 S ANTIOXIDANT# AND (CAPILLARY(W) ENDOTHELIAL(W) JUNCTION#)  
L4 17088 S VITAMIN C OR (ASCORBIC(W) ACID)  
L5 3 S HYDROXYETHYLSTARCH AND L4  
L6 218 S SUPEROXIDE(W) DISMUTASE AND L4  
L7 121 S CATALASE AND L6  
L8 32 S L7 AND GLUTATHIONE(W) PEROXIDASE  
L9 15 S HYDROXYETHYL(W) RUTOSIDE  
L10 0 S L8 AND L9  
L11 2 S L8 AND CAMP

=> d L11 1-2 kwic

US PAT NO: 5,725,804 [IMAGE AVAILABLE]

L11: 1 of 2

SUMMARY:

BSUM(32)

Still . . . acids, alpha-hydroxy carboxylic acids and dicarboxylic acids. Examples in this group include lactic acid (D and L forms), succinic acid, **ascorbic acid** and 1-ketoglutaric acid.

DETDESC:

DETD(15)

|                           |      |           |
|---------------------------|------|-----------|
| Acid                      | 500  | 1000      |
| Thioctic Acid (oxidized)  | 10   | 500       |
| Stannous Chloride         | 250  | 2500      |
| Succinic Acid (4*)        | 1000 | 2500      |
| <b>Ascorbic Acid</b> (4*) | 1000 | 2500      |
| 1-Ketoglutaric Acid (4*)  | 500  | 1000      |
| Cysteine (4*)             | 500  | 2500      |
| Manganese Chloride (4*)   | 1000 | 2500. . . |

DETDESC:

DETD(227)

The . . . within much less than one hour and without the need for other purification. Examples of reducing agents are dithiothreitol, dithioerythritol, **ascorbic acid**, 2-mercaptoethanol, and pyrophosphate. In addition, the reduced TcO.sub.2.sup.- may first be stabilized by an intermediate product involving D-glucarate.

DETDESC:

DETD(248)

13-Azaprostanoic . . . G2, H2); 16-16-Dimethyl-prostaglandin E2; 6-Keto-prostaglandin F1.alpha.; 2,3-Dinor 6-keto-prostaglandin F1.alpha.; 9,11-Dideoxy-9.alpha.,11.alpha.-methanoepoxyprostaglandin-F2.alpha.; Carbacyclin; Thromboxanes (CTA2, B2, A2); p-Arbutin; H-Arg-gly-Asp-OH; H-Arg-Gly-Asp-Ser-Pro-Ala-Ser-Ser-Lys-Pro-OH; Ascorbate oxidase; **ascorbic acid**; asparagine; aspartic acid; arachidonic acid

DETDESC:

DETD(956)

Alteplase; Anistreplase; Adenosine Deaminase; Amylase; Angiotensin I, II, III; Calmodulin; Carboxypeptidase; **Catalase**; Cellulase; Cholesterol oxidase; Cholinesterase; Chymotrypsin; Collagenase; Complement cascade proteins; Creatine phosphokinase; Deoxyribonuclease I, II; Dipeptidyl peptidase; DNA polymerase; Endoproteinase; Endonucleases;. . . Esterases; beta-Galactosidase; Galactose oxidase; Galactose dehydrogenase; Glucose dehydrogenase; Glucose oxidase; Glucose-6-phosphate dehydrogenase; Glucuronidase/Aryl sulfatase; Glutamate-oxaloacetate transaminase; Glutamate-pyruvate transaminase; Glutathione reductase; **Glutathione peroxidase**; Glycopeptidase; Hementin; Hemoglobin; Hexokinase; Hyaluronidase; Lactate dehydrogenase; Lactoperoxidase; Lactamase; Lipase; Myokinase;

Neuraminidase; Nicotinamide-adenine Dinucleotide kinase;  
Nicotinamide-adenine Dinucleotide oxidase; Nuclease; Nucleosidase;. .  
. Proteases; Protein Kinase C; Proteinase K; Renin; Reverse  
transcriptase; Ribonuclease (A, T1, T2, U2); RNA polymerase;  
Sialytransferase; Streptokinase; Subtilisin A; **Superoxide  
dismutase**; Terminal transferase; Urease; Urokinase

DETDESC:

DETD(962)

Protein . . . beta-Thromboglobulin; Thrombospondin; Transferrin  
(apo-, partial iron, holo); Tumor Necrosis factor; Vitronectin,  
Forskolin, Integrins; caged compounds (caged ATP, caged INSP3, caged  
**cAMP**, caged cGMP, caged GTP, caged carbamoyl chorine); Mezerein;  
Plasminogen; Aminocaproic acid; desmopressin acetate; Activase

US PAT NO: 5,616,311 [IMAGE AVAILABLE]

L11: 2 of 2

DETDESC:

DETD(171)

The . . . within much less than one hour and without the need for  
other purification. Examples of reducing agents are dithiothreitol,  
dithioerythritol, **ascorbic acid**, 2-mercaptoethanol, and  
pyrophosphate. In addition, the reduced TcO.sub.2.sup.- may first be  
stabilized by an intermediate product involving D-glucarate.

DETDESC:

DETD(192)

13-Azaprostanoic . . . H2); 16-16-Dimethyl-prostaglandin E2;  
6-Keto-prostaglandin F1.alpha.; 2,3-Dinor 6-ketoprostaglandin  
F1.alpha.; 9,11-Dideoxy-9.alpha., 11.alpha.-methanoepoxyprostaglandin-  
F2.alpha.; Carbacyclin; Thromboxanes (CTA2, B2, A2); p-Arbutin;  
H-Arg-gly-Asp-OH; H-Arg-Gly-Asp-Ser-Pro-Ala-Ser-Ser-Lys-Pro-OH;  
Ascorbate oxidase; **ascorbic acid**; asparagine; aspartic acid;  
arachidonic acid

DETDESC:

DETD(900)

Alteplase; Anistreplase; Adenosine Deaminase; Amylase; Angiotensin I,  
II, III; Calmodulin; Carboxypeptidase; **Catalase**; Cellulase;  
Cholesterol oxidase; Cholinesterase; Chymotrypsin; Collagenase;  
Complement cascade proteins; Creatine phosphokinase; Deoxyribonuclease  
I, II; Dipeptidyl peptidase; DNA polymerase; Endoproteinase;  
Endonucleases;. . . Esterases; beta-Galactosidase; Galactose  
oxidase; Galactose dehydrogenase; Glucose dehydrogenase; Glucose  
oxidase; Glucose-6-phosphate dehydrogenase; Glucuronidase/Aryl  
sulfatase; Glutamate-oxaloacetate transaminase; Glutamate-pyruvate  
transaminase; Glutathione reductase; **Glutathione peroxidase**;  
Glycopeptidase; Hementin; Hemoglobin; Hexokinase; Hyaluronidase;  
Lactate dehydrogenase; Lactoperoxidase; Lactamase; Lipase; Myokinase;  
Neuraminidase; Nicotinamide-adenine Dinucleotide kinase;  
Nicotinamide-adenine Dinucleotide oxidase; Nuclease; Nucleosidase;. .  
. Proteases; Protein Kinase C; Proteinase K; Renin; Reverse  
transcriptase; Ribonuclease (A, T1, T2, U2); RNA polymerase;  
Sialytransferase; Streptokinase; Subtilisin A; **Superoxide  
dismutase**; Terminal transferase; Urease; Urokinase

DETDESC:

DETD(906)

Protein . . . beta-Thromboglobulin; Thrombospondin; Transferrin  
(apo-, partial iron, holo); Tumor Necrosis factor; Vitronectin,  
Forskolin, Integrins; caged compounds (caged ATP, caged INSP3, caged  
**cAMP**, caged cGMP, caged GTP, caged carbamoyl chorine); Mezerein;  
Plasminogen; Aminocaproic acid; desmopressin acetate; Activase

=> log y

U.S. Patent & Trademark Office LOGOFF AT 09:56:36 ON 08 MAY 1998



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=> file embase

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FILE COVERS 1974 TO 7 May 1998 (19980507/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s CAMP and Neurospora and superoxide

33094 CAMP  
3053 NEUROSPORA  
23769 SUPEROXIDE

L1 2 CAMP AND NEUROSPORA AND SUPEROXIDE

=> d L1 1-2

L1 ANSWER 1 OF 2 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.  
AN 90276564 EMBASE  
TI Pharmacogenetics of cyclic guanylate, antioxidants, and antioxidant  
enzymes in **Neurospora**.  
AU Munkres K.D.  
CS Laboratory of Molecular Biology, University of Wisconsin, 1525  
Linden Drive, Madison, WI 53706, United States  
SO FREE RADIC. BIOL. MED., (1990) 9/1 (29-38).  
ISSN: 0891-5849 CODEN: FRBMEH  
CY United States  
DT Journal  
FS 004 Microbiology  
029 Clinical Biochemistry  
LA English

L1 ANSWER 2 OF 2 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.  
AN 84184692 EMBASE  
TI Genetic control of cellular longevity in **Neurospora**  
crassa: A relationship between cyclic nucleotides, antioxidants, and  
antioxygenic enzymes.  
AU Munkres K.D.; Rana R.S.  
CS Laboratory of Molecular Biology, The University of Wisconsin,  
Madison, WI 53706, United States  
SO AGE, (1984) 7/2 (30-35).  
CODEN: AGEEDB  
CY United States  
LA English

=> d his

(FILE 'HOME' ENTERED AT 20:07:46 ON 08 MAY 1998)

FILE 'EMBASE' ENTERED AT 20:07:55 ON 08 MAY 1998  
L1 2 S CAMP AND NEUROSPORA AND SUPEROXIDE

=> d  
L1 2 all

L1 ANSWER 2 OF 2 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.  
AN 84184692 EMBASE  
TI Genetic control of cellular longevity in **Neurospora**  
crassa: A relationship between cyclic nucleotides, antioxidants, and  
antioxygenic enzymes.  
AU Munkres K.D.; Rana R.S.  
CS Laboratory of Molecular Biology, The University of Wisconsin,  
Madison, WI 53706, United States  
SO AGE, (1984) 7/2 (30-35).  
CODEN: AGEEDB  
CY United States  
LA English  
AB Short-lived conidial longevity mutants of **Neurospora** were  
studied. Mutations at a number of closely-linked and probably  
functionally-redundant genes lead to deficiency of five antioxygenic  
enzymes, including **superoxide** dismutase. The results of  
this investigation indicate that: 1) the mutants are deficient in  
3',5'-cyclic adenosine monophosphate (**cAMP**); 2) their  
survival is enhanced by dietary **cAMP**, or 3',5'-cyclic  
guanosine monophosphate (**cGMP**), or antioxidants and; 3) dietary **cGMP**  
enhances wild-type levels of **superoxide** dismutase  
isozymes. The results support and extend the hypotheses that: 1) the  
genes regulate cyclic nucleotide concentration which, in turn,

regulates the level of **superoxide** dismutase; 2) the genes are functionally-redundant and; 3) dietary antioxidants may enhance survival by supplanting the function of the deficient antioxygenic enzymes.

CC 004.01.03.00.00.  
004.05.01.00.00.  
020.01.01.00.00.  
020.01.02.00.00.

CT EMTAGS: preliminary communication (0004); methodology (0130); heredity (0137); biological model (0502); nonhuman (0777); fungus (0763)

Medical Descriptors:

\*longevity

\*genetics

**\*neurospora crassa**

antioxidant agent

=> log y

COST IN U.S. DOLLARS

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7.14

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=> FILE CAPLUS, BIOSIS, EMBASE, MEDLINE, WIPDS

'WIPDS' IS NOT A VALID FILE NAME

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=> FILE CAPLUS, BIOSIS, EMBASE, MEDLINE

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=> D 1983:447701

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=> D 1983:447701/an

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=> S HYDROXYLETHYL AND RUTOSIDE

127 HYDROXYLETHYL  
356 RUTOSIDE  
L1 0 HYDROXYLETHYL AND RUTOSIDE

=>

=> FILE CAPLUS, BIOSIS, MEDLINE, EMBASE

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=> S RUTOSIDE AND HYDROXYETHYL

L2 612 RUTOSIDE AND HYDROXYETHYL

=> S MICROVASCULAR AND L2

L3 11 MICROVASCULAR AND L2

=> D 13 1-11

L3 ANSWER 1 OF 11 CAPLUS COPYRIGHT 1998 ACS  
AN 1989:400458 CAPLUS  
DN 111:458  
TI Effects of **hydroxyethyl** rutosides upon the permeability of single capillaries in the frog mesentery  
AU Blumberg, Sara; Clough, Geraldine; Michel, Charles  
CS Med. Sch., St. Mary's Hosp., London, W2 1PG, UK  
SO Br. J. Pharmacol. (1989), 96(4), 913-19  
CODEN: BJPCBM; ISSN: 0007-1188  
DT Journal  
LA English

L3 ANSWER 2 OF 11 CAPLUS COPYRIGHT 1998 ACS

AN 1988:447701 CAPLUS

DN 89:47701

TI Inhibitory effect of the flavonoid O-(.beta.-**hydroxyethyl**)  
**rutoside** on increased **microvascular** permeability  
induced by various agents in rat skin

AU Gerdin, Bengt; Svensjoe, Erik

CS Inst. For. Med., Univ. Uppsala, Uppsala, Swed.

SO Int. J. Microcirc.: Clin. Exp. (1983), 2(1), 39-46

CODEN: IMCEDT; ISSN: 0167-6865

DT Journal

LA English

L3 ANSWER 3 OF 11 CAPLUS COPYRIGHT 1998 ACS

AN 1978:609023 CAPLUS

DN 89:209023

TI The effect of O-(.beta.-**hydroxyethyl**)-**rutoside**  
(HR) on macromolecular leakage, thrombosis and haemostasis in  
experimental animals

AU Bergqvist, D.; Svensjo, E.; Arfors, K. E.

CS Dep. Exp. Med., Pharmacia AB, Uppsala, Swed.

SO Upsala J. Med. Sci. (1978), 83(2), 123-7

CODEN: UJMSAP; ISSN: 0300-9734

DT Journal

LA English

L3 ANSWER 4 OF 11 CAPLUS COPYRIGHT 1998 ACS

AN 1976:177566 CAPLUS

DN 84:177566

TI Effect of inhibition of PGE2-activity on FITC-dextran permeability  
in the hamster microvasculature

AU Svensjo, E.; Arfors, K. E.; Arturson, G.

CS Dep. Exp. Med., Pharm. AB, Uppsala, Swed.

SO Bibl. Anat. (1975), 13(Recent Adv. Crit. Microcirc. Res.), 303-4

CODEN: BIANA6

DT Journal

LA English

L3 ANSWER 5 OF 11 CAPLUS COPYRIGHT 1998 ACS

AN 1972:456568 CAPLUS

DN 77:56568

TI Effects of O-(.beta.-**hydroxyethyl**)rutosides (HR) on the  
increased **microvascular** permeability in experimental skin  
burns

AU Arturson, G.

CS Burns Cent., Univ. Hosp., Uppsala, Swed.

SO Acta Chir. Scand. (1972), 138(2), 111-117

CODEN: ACHSA3

DT Journal

LA English

L3 ANSWER 6 OF 11 BIOSIS COPYRIGHT 1998 BIOSIS

AN 78:254013 BIOSIS

DN BA66:66510

TI THE EFFECT OF O BETA **HYDROXYETHYL RUTOSIDE** ON  
MACRO MOLECULAR LEAKAGE THROMBOSIS AND HEMOSTASIS IN EXPERIMENTAL  
ANIMALS.

AU BERGQVIST D; SVENSJO E; ARFORS K E

CS DEP. EXP. MED., PHARMACIA AB, BOX 181, S-751 04 UPPSALA 1, SWED.

SO UPS J MED SCI 83 (2). 1978 123-129. CODEN: UJMSAP ISSN: 0300-9734

LA English

L3 ANSWER 7 OF 11 MEDLINE

AN 84288180 MEDLINE

DN 84288180

TI Inhibitory effect of the flavonoid O-(beta-**hydroxyethyl**)-**rutoside** on increased **microvascular** permeability induced by various agents in rat skin.

AU Gerdin B; Svensjo E

SO INTERNATIONAL JOURNAL OF MICROCIRCULATION: CLINICAL AND EXPERIMENTAL, (1983) 2 (1) 39-46.  
Journal code: GSY. ISSN: 0167-6865.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198412

L3 ANSWER 8 OF 11 MEDLINE

AN 78205374 MEDLINE

DN 78205374

TI The effect of O-(beta-**hydroxyethyl**)-**rutoside** (HR) on macromolecular leakage, thrombosis and haemostasis in experimental animals.

AU Bergqvist D; Svensjo E; Arfors K E

SO UPSALA JOURNAL OF MEDICAL SCIENCES, (1978) 83 (2) 123-7.  
Journal code: WRG. ISSN: 0300-9734.

CY Sweden

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 197810

L3 ANSWER 9 OF 11 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.

AN 94075678 EMBASE

TI The antioxidant properties of five O-(.beta.-**hydroxyethyl**)-**rutosides** of the flavonoid mixture venoruton.

AU Haenen G.R.M.M.; Jansen F.P.; Bast A.

CS Department of Pharmacochimistry, Faculty of Chemistry, Vrije Universiteit, De Boelelaan 1083, 1081 HV Amsterdam, Netherlands  
SO PHLEBOLOGY, (1993) 8/SUPPL. 1 (10-17).  
ISSN: 0268-3555 CODEN: PHLEEF

CY United Kingdom

DT Journal

FS 009 Surgery

030 Pharmacology

037 Drug Literature Index

LA English

SL English

L3 ANSWER 10 OF 11 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.

AN 79187267 EMBASE

TI Effect of HR (O-(.beta.-**hydroxyethyl**)-**rutoside**) on increased **microvascular** permeability to macromolecules induced by histamine, bradykinin and fibrin degradation products.

AU Gerdin B.; Svensjo E.

CS Inst. Forens. Med., Univ. Uppsala, Sweden

SO MICROVASC. RES., (1979) 17/3II (S105).  
CODEN: MIVRA6

CY United States

LA English

L3 ANSWER 11 OF 11 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.

AN 75025298 EMBASE

TI Experimental diabetic retinopathy.

AU Leuenberger P.M.; Beauchemin M.L.; Babel J.

CS Clin. Univ. Ophtalmol., Geneve, Switzerland

SO ARCH.OPHTAL. (Paris), (1974) 34/4 (289-302).  
CODEN: AROHA8

LA English



=> D 13 8 AB

L3 ANSWER 8 OF 11 MEDLINE

AB O-(beta-**hydroxyethyl**)-**rutoside** (HR) (Venoruton, Zyma AS, Nyon, Switzerland) has been investigated experimentally to evaluate the effect on **microvascular** permeability and thromboembolism. Permeability to macromolecules is diminished in a hamster cheek-pouch model. Haemostatic plug formation is impaired whereas laser-induced intravascular platelet aggregation is uninfluenced. There is a small but insignificant protection against sodium morrhuate (Eli Lilly and Co., Indianapolis, Indiana) induced femoral vein thrombosis.

=> D 13 9-10 AB

L3 ANSWER 9 OF 11 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.

AB Objective: To investigate the antioxidant properties of the five main constituents of the flavonoid preparation O-(.beta.-**hydroxyethyl**)-rutosides, which may be related to its protective effect on **microvascular** permeability. The five components were 7-**hydroxyethyl rutoside** (Zy 15077), 7,4'-dihydroxyethyl **rutoside** (Zy 15533), 7,3',4'-trihydroxyethyl **rutoside** (Zy 15534), 5,7,3',4'-tetrahydroxyethyl **rutoside** (Zy 15535) and 7,3',4'-trihydroxyethyl quercetin (Zy 15529). Methods: (1) Measurement of hydroxyl radical scavenging, using the deoxyribose method which measures the generation of thiobarbituric acid (TBA)-reactive material generated by hydrogen peroxide, ascorbate and ferric chloride. This was performed with and without the iron chelator EDTA and flavonoid concentrations ranging from 100 to 500 .mu.M. (2) Lipid peroxidation in rat liver microsomes was measured using two methods: (a) measurement of TBA-reactive material induced by ferrous sulphate and ascorbate; (b) measurement of the fall in oxygen tension induced by ferrous sulphate. The flavonoids were studied at a concentration of 400 .mu.M. Results: (1) The potency of hydroxyl radical scavenging (with EDTA) was directly proportional to the degree of hydroxyethylation of the molecules, i.e. Zy 15535 was the most active and Zy 15077 the least. However, for site-specific scavenging (i.e. without EDTA) this order was reversed, Zy 15077 being the most potent. Separate experiments confirmed that this was due to the iron chelating properties of the flavonoids. (2) Both series of experiments on lipid peroxidation yielded the same results, i.e. Zy 15077 (and Zy 15529) were the most active and Zy 15535 was almost inactive. Conclusions: The high potency of Zy 15077 and Zy 15529 as inhibitors of lipid peroxidation are related to their site-specific scavenging activity, resulting from iron chelation.

L3 ANSWER 10 OF 11 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.

=> S EXOGENOUS (w) CATALASE

L4 307 EXOGENOUS (W) CATALASE

=> S 307 AND SUPEROXIDE DISMUTASE

L5 28 307 AND SUPEROXIDE DISMUTASE

=> S 14 AND SUPEROXIDE DISMUTASE

L6 95 L4 AND SUPEROXIDE DISMUTASE

=> S 16 AND GLUTATHIONE PEROXIDASE

L7 13 L6 AND GLUTATHIONE PEROXIDASE

=> S ASCORB? AND 17

L8 0 ASCORB? AND L7

=> D 17 1-13

L7 ANSWER 1 OF 13 CAPLUS COPYRIGHT 1998 ACS

AN 1993:144843 CAPLUS

DN 118:144843

TI Changes in antioxidant enzymes in isolated cardiac myocytes subjected to hypoxia-reoxygenation

AU Kirshenbaum, Lorrie A.; Singal, Pawan K.

CS Res. Cent., St. Boniface Gen. Hosp., Winnipeg, MB, Can.

SO Lab. Invest. (1992), 67(6), 796-803

CODEN: LAINAW; ISSN: 0023-6837

DT Journal

LA English

L7 ANSWER 2 OF 13 CAPLUS COPYRIGHT 1998 ACS

AN 1990:510606 CAPLUS

DN 113:110606

TI Hydrogen peroxide is the most toxic oxygen species for *Onchocerca cervicalis microfilariae*

AU Callahan, H. L.; Crouch, R. K.; James, E. R.

CS Dep. Ophthalmol., Medical Univ. South Carolina, Charleston, SC, 29425, USA

SO Parasitology (1990), 100(3), 407-15

CODEN: PARAAE; ISSN: 0031-1820

DT Journal

LA English

L7 ANSWER 3 OF 13 CAPLUS COPYRIGHT 1998 ACS

AN 1980:584198 CAPLUS

DN 93:184198

TI The role of superoxide in the destruction of erythrocyte targets by human neutrophils

AU Weiss, Stephen J.

CS Simpson Mem. Inst., Univ. Michigan, Ann Arbor, MI, 48109, USA

SO J. Biol. Chem. (1980), 255(20), 9912-17

CODEN: JBCHA3; ISSN: 0021-9258

DT Journal

LA English

L7 ANSWER 4 OF 13 BIOSIS COPYRIGHT 1998 BIOSIS

AN 93:137888 BIOSIS

DN BA95:70688

TI CHANGES IN ANTIOXIDANT ENZYMES IN ISOLATED CARDIAC MYOCYTES SUBJECTED TO HYPOXIA-REOXYGENATION.

AU KIRSHENBAUM L A; SINGAL P K

CS ST. BONIFACE GENERAL HOSP. RES. CENT., 351 TACHE AVE., WINNIPEG, MANITOBA R2H 2A6, CAN.

SO LAB INVEST 67 (6). 1992. 796-803. CODEN: LAINAW ISSN: 0023-6837

LA English

L7 ANSWER 5 OF 13 BIOSIS COPYRIGHT 1998 BIOSIS

AN 90:376983 BIOSIS

DN BA90:63664

TI HYDROGEN PEROXIDE IS THE MOST TOXIC OXYGEN SPECIES FOR *ONCHOCERCA-CERVICALIS MICROFILARIAE*.

AU CALLAHAN H L; CROUCH R K; JAMES E R

CS DEP. BIOLOGICAL CHEM. AND MOL. PHARMACOL., HARVARD MED. SCH., BOSTON,  
MASS. 02115.  
SO PARASITOLOGY 100 (3). 1990. 407-416. CODEN: PARAAE ISSN: 0031-1820  
LA English

L7 ANSWER 6 OF 13 BIOSIS COPYRIGHT 1998 BIOSIS  
AN 81:194304 BIOSIS  
DN BA71:64296  
TI ROLE OF SUPER OXIDE IN THE DESTRUCTION OF ERYTHROCYTE TARGETS BY  
HUMAN NEUTROPHILS.  
AU WEISS S J  
CS SIMPSON MEMORIAL INST., UNIV. OF MICHIGAN, ANN ARBOR, MICH. 48109.  
SO J BIOL CHEM 255 (20). 1980. 9912-9917. CODEN: JBCHA3 ISSN: 0021-9258  
LA English

L7 ANSWER 7 OF 13 MEDLINE  
AN 93366068 MEDLINE  
DN 93366068  
TI Antioxidant protection against oxidant-induced damage in cultured  
gastric mucosal cells.  
AU Hiraishi H; Yajima N; Yamaguchi N; Ishida M; Katoh Y; Harada T;  
Terano A; Ivey K J  
CS Second Department of Internal Medicine, Dokkyo University School of  
Medicine, Tochigi, Japan.  
SO GASTROENTEROLOGIA JAPONICA, (1993 May) 28 Suppl 5 132-8.  
Journal code: FHY. ISSN: 0435-1339.  
CY Japan  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199312

L7 ANSWER 8 OF 13 MEDLINE  
AN 93095396 MEDLINE  
DN 93095396  
TI Changes in antioxidant enzymes in isolated cardiac myocytes  
subjected to hypoxia-reoxygenation.  
AU Kirshenbaum L A; Singal P K  
CS Division of Cardiovascular Sciences, St. Boniface General Hospital  
Research Center, Winnipeg, Manitoba, Canada..  
SO LABORATORY INVESTIGATION, (1992 Dec) 67 (6) 796-803.  
Journal code: KZ4. ISSN: 0023-6837.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals; Cancer Journals  
EM 199303

L7 ANSWER 9 OF 13 MEDLINE  
AN 90301396 MEDLINE  
DN 90301396  
TI Hydrogen peroxide is the most toxic oxygen species for *Onchocerca  
cervicalis microfilariae*.  
AU Callahan H L; Crouch R K; James E R  
CS Department of Ophthalmology, Medical University of South Carolina,  
Charleston 29425.  
NC EY05757 (NEI)  
EY06462 (NEI)  
EY07542 (NEI)  
SO PARASITOLOGY, (1990 Jun) 100 Pt 3 407-15.  
Journal code: OR0. ISSN: 0031-1820.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals

EM 199010

L7 ANSWER 10 OF 13 MEDLINE  
AN 81046800 MEDLINE  
DN 81046800  
TI The role of superoxide in the destruction of erythrocyte targets by human neutrophils.  
AU Weiss S J  
NC R01-AI-16524-01 (NIAID)  
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1980 Oct 25) 255 (20) 9912-7.  
Journal code: HIV. ISSN: 0021-9258.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 198103

L7 ANSWER 11 OF 13 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.  
AN 93024630 EMBASE  
TI Changes in antioxidant enzymes in isolated cardiac myocytes subjected to hypoxia-reoxygenation.  
AU Kirshenbaum L.A.; Singal P.K.  
CS St. Boniface General Hosp. Res. Ctr., 351 Tache Ave., Winnipeg, Man. R2H 2A6, Canada  
SO LAB. INVEST., (1992) 67/6 (796-803).  
ISSN: 0023-6837 CODEN: LAINAW  
CY United States  
DT Journal  
FS 005 General Pathology and Pathological Anatomy  
018 Cardiovascular Diseases and Cardiovascular Surgery  
029 Clinical Biochemistry  
LA English  
SL English

L7 ANSWER 12 OF 13 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.  
AN 90333719 EMBASE  
TI Hydrogen peroxide is the most toxic oxygen species for Onchocerca cervicalis microfilariae.  
AU Callahan H.L.; Crouch R.K.; James E.R.  
CS Department of Ophthalmology, Medical University of South Carolina, Charleston, SC 29425, United States  
SO PARASITOLOGY, (1990) 100/3 (407-415).  
ISSN: 0031-1820 CODEN: PARAAE  
CY United Kingdom  
DT Journal  
FS 004 Microbiology  
LA English

L7 ANSWER 13 OF 13 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.  
AN 81051678 EMBASE  
TI The role of superoxide in the destruction of erythrocyte targets by human neutrophils.  
AU Weiss S.J.  
CS Simpson Mem. Inst., Univ. Michigan, Ann Arbor, Mich. 48109, United States  
SO J. BIOL. CHEM., (1980) 255/20 (9912-9917).  
CODEN: JBCHA3  
CY United States  
LA English

=> D 17 7

L7 ANSWER 7 OF 13 MEDLINE  
AN 93366068 MEDLINE

DN 93366068  
 TI Antioxidant protection against oxidant-induced damage in cultured gastric mucosal cells.  
 AU Hiraishi H; Yajima N; Yamaguchi N; Ishida M; Katoh Y; Harada T; Terano A; Ivey K J  
 CS Second Department of Internal Medicine, Dokkyo University School of Medicine, Tochigi, Japan.  
 SO GASTROENTEROLOGIA JAPONICA, (1993 May) 28 Suppl 5 132-8.  
 Journal code: FHY. ISSN: 0435-1339.  
 CY Japan  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199312

=> D AB

L8 HAS NO ANSWERS

L4 307 SEA EXOGENOUS(W) CATALASE  
 L6 95 SEA L4 AND SUPEROXIDE DISMUTASE  
 L7 13 SEA L6 AND GLUTATHIONE PEROXIDASE  
 L8 0 SEA ASCORB? AND L7

=> D 17 13 AB

L7 ANSWER 13 OF 13 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.  
 AB Human neutrophils exposed to the soluble stimulus, phorbol myristate acetate, generate a flux of O<sub>2</sub>(.-) which can destroy human erythrocyte targets. Under optimal conditions, each neutrophil was capable of lysing almost 10 erythrocyte targets. Hemolysis was inhibited by exogenous copper-zinc or iron **superoxide dismutase** while neither heat-denatured enzyme nor albumin inhibited cytotoxicity. Although neutrophils can also generate H<sub>2</sub>O<sub>2</sub>, neither catalase nor a glutathion-**glutathione peroxidase** system inhibited hemolysis. Hemolysis was prevented by conversion of the hemoglobin to carbon monoxihemoglobin, suggesting an intracellular mechanism of cytotoxicity. Conversion of hemoglobin to methemoglobin by nitrite treatment did not impair neutrophil-mediated hemolysis. However, nitrite-treated targets were not protected by **superoxide dismutase**, while **exogenous catalase** inhibited cytotoxicity, suggesting a potential role for H<sub>2</sub>O<sub>2</sub> and methemoglobin. H<sub>2</sub>O<sub>2</sub> and methemoglobin are known to interact to form an oxidant complex whose cytotoxic potential was underlined by the marked sensitivity of nitrite-treated cells to commercial H<sub>2</sub>O<sub>2</sub>. It is proposed that neutrophil-derived O<sub>2</sub>(.-) oxidizes oxyhemoglobin to generate methemoglobin and H<sub>2</sub>O<sub>2</sub> which interact to form a cytotoxic complex capable of hemolyzing the erythrocyte target.

=> S Camp AND OXIDAT?

L9 1395 CAMP AND OXIDAT?

=> S CAMP (p) OXIDAT?

PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH  
 FIELD CODE - 'AND' OPERATOR ASSUMED 'CAMP (P) OXIDAT?'  
 L10 1180 CAMP (P) OXIDAT?

=> S ANTIOXIDANT# AND Camp

L11 209 ANTIOXIDANT# AND CAMP

=> S L11 AND SUPEROXIDE DISMUTASE

=> D 112 1-33 TI,SO,PY

L12 ANSWER 1 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Enhanced inhibition by melatonin of .alpha.-adrenoceptor-induced  
aortic contraction and inositol phosphate production in vascular  
smooth muscle cells from spontaneously hypertensive rats

SO J. Hypertens. (1998), 16(3), 339-347

CODEN: JOHYD3; ISSN: 0263-6352

PY 1998

L12 ANSWER 2 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Overexpression of manganese **superoxide dismutase**  
selectively modulates the activity of Jun-associated transcription  
factors in fibrosarcoma cells

SO Cancer Res. (1997), 57(23), 5265-5271

CODEN: CNREA8; ISSN: 0008-5472

PY 1997

L12 ANSWER 3 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Protective effects of sea buckthorn oil on experimental cold injury

SO Hebei Yike Daxue Xuebao (1997), 18(4), 206-208

CODEN: HEDXFQ; ISSN: 1007-3205

PY 1997

L12 ANSWER 4 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI The manganese **superoxide dismutase** gene of  
Drosophila: structure, expression, and evidence for regulation by  
MAP kinase

SO DNA Cell Biol. (1997), 16(4), 391-399

CODEN: DCEBE8; ISSN: 1044-5498

PY 1997

L12 ANSWER 5 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Vasodilatory effects of a salen-manganese complex with potent  
oxyradical scavenger activities

SO J. Vasc. Res. (1997), 34(1), 49-57

CODEN: JVREE9; ISSN: 1018-1172

PY 1997

L12 ANSWER 6 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Enhancement of oxidative stress tolerance in transgenic tobacco  
plants overproducing Fe-**superoxide dismutase** in  
chloroplasts

SO Plant Physiol. (1996), 112(4), 1703-1714

CODEN: PLPHAY; ISSN: 0032-0889

PY 1996

L12 ANSWER 7 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Solution for prolonged organ preservation

SO U.S., 71 pp. Cont.-in-part of U.S. 5,370,989.

CODEN: USXXAM

PY 1996

L12 ANSWER 8 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Downregulation of Cu/Zn **superoxide dismutase**  
leads to cell death via the nitric oxide-peroxynitrite pathway

SO J. Neurosci. (1996), 16(1), 253-61

CODEN: JNRSDS; ISSN: 0270-6474

PY 1996

L12 ANSWER 9 OF 33 CAPLUS COPYRIGHT 1998 ACS

TI Inhibitory effects of **superoxide dismutase** and  
 cyclic guanosine 3',5'-monophosphate on estrogen production in  
 cultured rat granulosa cells  
 SO Endocrinology (1995), 136(12), 5533-9  
 CODEN: ENDOAO; ISSN: 0013-7227  
 PY 1995

L12 ANSWER 10 OF 33 CAPLUS COPYRIGHT 1998 ACS  
 TI Regulation of nerve growth factor secretion in L-M cells by catechol  
 derivatives  
 SO Neurosci. Res. (Shannon, Irel.) (1993), 17(1), 71-75  
 CODEN: NERADN; ISSN: 0168-0102  
 PY 1993

L12 ANSWER 11 OF 33 CAPLUS COPYRIGHT 1998 ACS  
 TI Mechanisms of action of Pseudomonas aeruginosa pyocyanin on human  
 ciliary beat in vitro  
 SO Infect. Immun. (1993), 61(7), 2848-53  
 CODEN: INFIBR; ISSN: 0019-9567  
 PY 1993

L12 ANSWER 12 OF 33 CAPLUS COPYRIGHT 1998 ACS  
 TI Mechanism of fluoride action on periodontium tissue  
 SO Fiziol. Zh. (Kiev) (1992), 38(2), 85-90  
 CODEN: FIZHDO; ISSN: 0201-8489  
 PY 1992

L12 ANSWER 13 OF 33 CAPLUS COPYRIGHT 1998 ACS  
 TI Pharmacogenetics of cyclic guanylate, **antioxidants**, and  
**antioxidant** enzymes in Neurospora  
 SO Free Radical Biol. Med. (1990), 9(1), 29-38  
 CODEN: FRBMEH; ISSN: 0891-5849  
 PY 1990

L12 ANSWER 14 OF 33 CAPLUS COPYRIGHT 1998 ACS  
 TI Lung injury in Fischer but not Sprague-Dawley rats after short-term  
 hyperoxia  
 SO Am. J. Physiol. (1990), 259(6, Pt. 1), L451-L458  
 CODEN: AJPHAP; ISSN: 0002-9513  
 PY 1990

L12 ANSWER 15 OF 33 CAPLUS COPYRIGHT 1998 ACS  
 TI Genetic control of cellular longevity in Neurospora crassa: a  
 relationship between cyclic nucleotides, **antioxidants**, and  
 antioxygenic enzymes  
 SO Age (Omaha, Nebr.) (1984), 7(2), 30-5  
 CODEN: AGEEDB; ISSN: 0161-9152  
 PY 1984

L12 ANSWER 16 OF 33 BIOSIS COPYRIGHT 1998 BIOSIS  
 TI Inhibitory effects of **superoxide dismutase** and  
 cyclic guanosine 3',5'-monophosphate on estrogen production in  
 cultured rat granulosa cells.  
 SO Endocrinology 136 (12). 1995. 5533-5539. ISSN: 0013-7227

L12 ANSWER 17 OF 33 BIOSIS COPYRIGHT 1998 BIOSIS  
 TI REGULATION OF NERVE GROWTH FACTOR SECRETION IN L-M CELLS BY CATECHOL  
 DERIVATIVES.  
 SO NEUROSCI RES 17 (1). 1993. 71-75. CODEN: NERADN ISSN: 0168-0102

L12 ANSWER 18 OF 33 BIOSIS COPYRIGHT 1998 BIOSIS  
 TI MECHANISMS OF ACTION OF PSEUDOMONAS-AERUGINOSA PYOCYANIN ON HUMAN  
 CILIARY BEAT IN-VITRO.  
 SO INFECT IMMUN 61 (7). 1993. 2848-2853. CODEN: INFIBR ISSN: 0019-9567

L12 ANSWER 19 OF 33 BIOSIS COPYRIGHT 1998 BIOSIS  
 TI ON BIOCHEMICAL HETEROGENEITY OF RHEUMATOID ARTHRITIS.  
 SO TER ARKH 64 (5). 1992. 17-20. CODEN: TEARAI ISSN: 0040-3660

L12 ANSWER 20 OF 33 BIOSIS COPYRIGHT 1998 BIOSIS  
 TI PHARMACOGENETICS OF CYCLIC GUANYLATE **ANTIOXIDANTS** AND  
**ANTIOXIDANT** ENZYMES IN NEUROSPORA.  
 SO FREE RADICAL BIOL MED 9 (1). 1990. 29-38. CODEN: FRBMEH ISSN:  
 0891-5849

L12 ANSWER 21 OF 33 BIOSIS COPYRIGHT 1998 BIOSIS  
 TI GENETIC CONTROL OF CELLULAR LONGEVITY IN NEUROSPORA-CRASSA A  
 RELATIONSHIP BETWEEN CYCLIC NUCLEOTIDES **ANTIOXIDANTS** AND  
 ANTIOXYGENIC ENZYMES.  
 SO AGE (OMAHA) 7 (2). 1984. 30-35. CODEN: AGEEDB ISSN: 0161-9152

L12 ANSWER 22 OF 33 MEDLINE  
 TI Oxidative modulation of cyclic AMP-dependent protein kinase in human  
 fibroblasts: possible role in psoriasis.  
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=> D

L12 33 AB

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AB Short-lived conidial longevity mutants of Neurospora were studied. Mutations at a number of closely-linked and probably functionally-redundant genes lead to deficiency of five antioxygenic enzymes, including **superoxide dismutase**. The results of this investigation indicate that: 1) the mutants are deficient in 3',5'-cyclic adenosine monophosphate (**cAMP**); 2) their survival is enhanced by dietary **cAMP**, or 3',5'-cyclic guanosine monophosphate (**cGMP**), or **antioxidants** and; 3) dietary **cGMP** enhances wild-type levels of **superoxide dismutase** isozymes. The results support and extend the hypotheses that: 1) the genes regulate cyclic nucleotide concentration which, in turn, regulates the level of **superoxide dismutase**; 2) the genes are functionally-redundant and; 3) dietary **antioxidants** may enhance survival by supplanting the function of the deficient antioxygenic enzymes.

=> LOG Y

COST IN U.S. DOLLARS

SINCE FILE  
ENTRY

TOTAL  
SESSION

FULL ESTIMATED COST

98.35

104.17

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